

**REMARKS**

**STATUS OF CLAIMS**

Claims 1-3, 5-18, 20-27 and 29 are now pending.

Claims 1-3, 5-18, 20-27 and 29 are pending in this application, claims 1, 13 and 21 being the independent claims.

Claims 17, 21, 22 and 25 were objected to for various informalities. The informalities have been corrected above.

Claims 1-29 stand rejected under 35 U.S.C. 102(b) as being anticipated by Li, U.S. Patent No. 5,745,618. This rejection as it applies to the pending claims is hereby traversed for at least the following reasons.

Independent claims 1, 13 and 21 have been amended above to clearly point out that the claimed waveguide regions are located in the slab waveguide and not in either the array of input or output waveguides. This feature of the invention is reflected in claim 1, for example, by reciting *a plurality of waveguiding regions being spaced apart from one other and isolated from one another by at least one discrete sector having a lower refractive index than said waveguiding regions*. That is, as seen in the embodiment of the invention depicted in FIG. 4 of the application, wavguiding segments 330 are all isolated from one another by cladding regions 340.

In Li, the claimed waveguiding regions that form the segmented transition region 22 correspond to segmented silica paths  $a_1 \dots a_n$  (see FIG. 5 of the Li patent). These paths  $a_1 \dots a_n$  intersect the output waveguide array 26. As a result, the segmented silica paths  $a_1 \dots a_n$  are not isolated from one another. Rather, segmented silica paths  $a_1 \dots a_n$  are interconnected by the individual waveguides 26, thereby forming regions  $r_{mn}$ . By contrast, in the present invention the waveguiding segments 330 seen in FIG. 4 of the application are isolated from one another by cladding regions 340.

The present invention achieves a number of advantages by eliminating the regions  $r_{mn}$  and replacing them instead with the larger cladding regions 340. In particular, voids are less likely to form in cladding regions 340 than in regions  $r_{mn}$ , thereby allowing the device to be fabricated with less stringent process control.

Accordingly, for at least these reasons it is respectfully requested that the rejection of amended independent claims 1, 13 and 21 under 35 U.S.C. 102(b) be reconsidered and withdrawn. The rejection of the pending dependent claims under 35 U.S.C. 102(b) should also be reconsidered and withdrawn since these claims depend from and further define the invention of claims 1, 13 and 21.

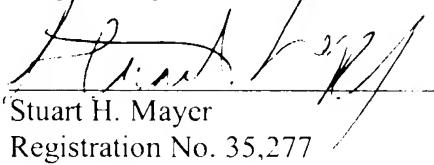
**Conclusion**

In view of the foregoing, it is believed that the application is now in condition for allowance and early passage of this case to issue is respectfully requested. If the Examiner believes there are still unresolved issues, a telephone call to the undersigned would be welcomed.

**Fees**

If there are any fees due and owing in respect to this amendment, the Examiner is authorized to charge such fees to deposit account number 50-1047.

Respectfully submitted,

  
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